

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/655,916	CURRAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	James Balls	1625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-3, and 28-34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                     | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input checked="" type="checkbox"/> Other <u>Drawings accepted 9/5/03</u>           |

### DETAILED ACTION

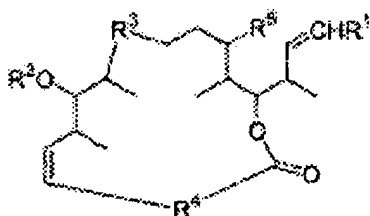
1. Claims 1-3 and 28-34 are pending.

### EXAMINER'S AMENDMENT

The application has been amended as follows:

The abstract is amended to limit its length to less than a 150 words. The abstract may not exceed 150 words in length under 37 CFR §1.72(b) and MPEP 608.01(b). The following language will replace the language in the abstract.

The present invention relates to analogs of discodermolide and dictyostatin-1, intermediates for the synthesis of such analogs and methods of synthesis of such intermediates and analogs having the following structure:



wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are defined herein.

### Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

Applicants claim analogues of dictyostatin-1, which is a cyclic macrolactone and a well-known cancer agent. Dictyostatin-1 is disclosed in U.S. Patent No. 5,430,053

(Pettit et al.). Applicants' compounds have a ring structures very similar to dictyostatin-1 except for ring modifications at the R<sup>3</sup> and R<sup>4</sup> positions. Applicants found that the macrolactone ring can be modified in these two locations without disrupting the compound's anti-cancer activity. No art exists wherein the macrolactone ring has been expanded at the R<sup>3</sup> and R<sup>4</sup> position. Motivation to make these two specific modifications is lacking.

Querolle et al., *Synthesis of Novel Macrocyclic Docetaxel Analogues. Influence of Their Macrocyclic Ring Size on Tubulin Activity*, J. MED. CHEM., 46:3623-3630 (2003) describes the synthesis of a series of novel macrocyclic taxoids. However, this reference is published after applicants' priority date. Also, this reference teaches away from applicants' findings. Querolle et al. made ring-size modifications to taxol and reported that those new taxoids showed decreased activity and that only the 22-ring taxoids exhibits significant anti-cancer activity whereas applicants' dictyostatin-1 ring-size modification maintained activity.

Any comments considered necessary by applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Balls whose telephone number is (571) 272-7997. The examiner can normally be reached on Mon - Fri 8:00am - 4:30pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. James Balls  
Examiner  
Art Unit 1625

  
Cecelia Tsang  
Supervisory Patent Examiner  
Art Unit 1625